

REMARKS

Claims 1-4, 6-14 and 20-34 are pending, with claims 1, 10, 22, and 30 being independent. Claims 1, 9, 26 and 27 have been amended herein by virtue of this amendment. No new matter has been added.

Claims 1 and 9 are objected to for informalities, and claim 9 is rejected under 35 U.S.C. 112, second paragraph as being indefinite. Claims 26 and 27 are subject to a double-patenting rejection. The above-mentioned amendments to claims 1, 9, 26, and 27 are made in view of these objections/rejections, and are believed to fully address them. Accordingly, Applicant requests that the objections and rejections be withdrawn.

Claims 1-4, 6-14, 26, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (in particular, FIGS. 2 and 3 of the present application) in view of U.S. Patent No. 4,410,558 to Izu et al. ("Izu"). Claims 20-25 and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Izu, and further in view of U.S. Patent 6,156,151 to Komino et al. (Komino) or U.S. Patent No. 4,808,553 to Yamazaki (Yamazaki).

Regarding the rejection of claims 1-4 and 6-14 under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Izu, Applicant respectfully submits that the proposed combination of the system of FIG. 3 of the present application with Izu and FIG. 2 of the present application does not validly support a prima facie case of obviousness under 35 U.S.C. 103(a).

In particular, the Office Action asserts that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of the admitted prior art by Izu "...so as to introduce the gas in a direction parallel to the first direction as suggested by FIG. 3 of the admitted prior art because this is shown to be conventional ... (and) ... it would have been a matter of design choice to determine the optimum direction of gas flow and would not lend patentability to the instant application absent the showing of unexpected results" (see Office Action, paragraph bridging pages 5-6).

In response, Applicant notes that independent claim 1, for example, recites, "said gas is introduced into said chamber in a direction parallel with said first direction so that a flow of said gas is rectified in a direction away from a film formation surface of the substrate." As described in Applicant's response of May 25, 2004, for example, and in Applicant's specification with respect to FIGS. 4A and 4B, this feature is advantageous in that fine particles and/or fragmental particles are not deposited onto a film formation surface. That is, such deposits are avoided by introducing gas into the chamber in a direction parallel with the first direction so that a flow of gas is rectified in a direction away from a film formation surface of the substrate.

In contrast, none of the cited prior art or the present Office Action provides this or any other advantage for modifying the proposed combination of Applicant's FIG. 2 and Izu by Applicant's FIG. 3. Similar comments apply to independent claim 10.

As a result, Applicant respectfully submits that no proper motivation has been provided as to why an artisan of ordinary skill would have modified the proposed combination of Applicant's FIG. 2 and Izu by using Applicant's FIG. 3, to arrive at the inventions of claims 1 and 10. Accordingly, Applicant submits that independent claims 1 and 10 are allowable for at least the reasons set forth above, so that dependent claims 2-4, 6-9, 11-14, 20, and 21 are believed to be allowable for at least the same reasons.

Regarding the rejection of claims 20-25 and 28-34 under 35 U.S.C. 103(a) as being unpatentable over admitted prior art in view of Izu, and further in view of Komino or Yamazaki., Applicant submits that neither Komino nor Yamazaki discloses or properly suggests all of the limitations of at least independent claims 22 and 30. For example, independent claim 22 recites, "an abnormal discharge preventing plate between said exhaust means and said electrode wherein said abnormal discharge preventing plate has a plurality of openings, wherein a plurality of openings are located on a surface of the electrode opposing the substrate, wherein the gas is exhausted from the plurality of openings of said electrode and the plurality of openings of said abnormal discharge preventing plate to the outside of the vacuum chamber."

The Office Action admits that none of Applicant's FIG. 2, FIG. 3, or Izu disclose or suggest such an abnormal discharge preventing plate, as claimed, and relies on Komino or

Yamazaki for these teachings. Specifically, the Office Action states on page 6 that Komino discloses, "... a plate 118 having a plurality of opening 118a for preventing discharge," and refers to FIGS. 1, 4, 7, 9A, 9B, 10, or 11 of that reference. Further, the Office Action refers to Yamazaki as disclosing such an abnormal discharge plate by virtue of an exhaust means 14 and a plate 20' comprising a plurality of openings, allegedly for preventing abnormal discharge from entering the exhaust means.

However, Applicant respectfully submits that neither Komino nor Yamazaki discloses or properly suggests the abnormal discharge plate, as recited in independent claim 22. For example, the plate 118a of Komino is merely an exhaust means, and Komino is silent as to whether the plate 118a, in fact, prevents a discharge as recited in independent claim 22 (see, e.g., column 6, lines 13-14). Somewhat similarly, the plate 20' of Yamazaki is a mesh grid that, again, is not described anywhere in Yamazaki as being an abnormal discharge preventing plate. Instead, the plate 20' is described as being used to obtain a glow discharge, and not for preventing abnormal discharge as recited in independent claim 22.

Similar comments apply the abnormal discharge preventing plate of independent claim 30, as recited therein. Accordingly, since none of the cited prior art discloses or properly suggests at least these features of independent claims 22 and 30, as recited therein, Applicant submits that independent claims 22 and 30 are allowable for at least these reasons. As a result, dependent claims 23-25, 28, 29, and 31-34, as well as amended claims 26 and 27 (which now depend from claims 22 and 26, respectively), are allowable for at least the same reasons.

Based on the above, all of the pending claims 1-4, 6-14, and 20-34 are believed to be in condition for allowance, and such action is hereby requested in the Examiner's next official communication.

Applicant : Yonezawa, et al.
Serial No. : 09/820,520
Filed : March 28, 2001
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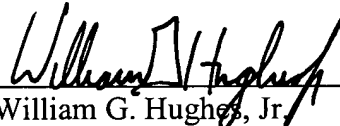
Attorney's Docket No.: 07977-270001 / US4820

Enclosed is a \$120.00 check for the One-Month Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: _____

April 11, 2005



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